

# SURVEY CONTROL SHEET U2525C

## GPS Calibration Report

Project : u2525cMrkSC

TIP Number	U2525C	Date & Time	3:41:36 PM 12/28/2015
User name	klmdson	Zone	North Carolina 3200
Coordinate System	Site(at ground)	Geoid Model	GEOID99 (Conus)
Horizontal Datum	NAD 1983 (Conus)		
Vertical Datum	NAVD 88		
Coordinate Units	US survey feet		
Distance Units	US survey feet		
Height Units	US survey feet		

LOCAL SITE INFORMATION	
Localized around	WYRICK
Latitude	36°10'59.62293"N
Longitude	79°46'26.92372"W
Site Scale Factor	1.0000435100
Height	698.109sft

The North Carolina Department of Transportation uses a **Localized Coordinate System** which is very similar to North Carolina Zone 3200 from which it is derived. **Please take care in utilizing these coordinates to eliminate confusion of the two systems.** This file is to aid in the use of Real Time Kinematic (RTK) GPS during construction layout.

### Datum Transformation Parameters

Datum Transformation computation not requested

### Updated Default Projection (Transverse Mercator) Definition

Updated default projection not requested

### Horizontal Adjustment Parameters

Northing coordinate of rotation center	871913.936sft
Easting coordinate of rotation center	1768393.012sft
Rotation about the center point	0°00'00"
Translation north	0.000sft
Translation east	0.005sft
Scale factor	1.00000007

### Vertical Adjustment Parameters

Northing coordinate of origin point	909873.112sft
Easting coordinate of origin point	1728512.491sft
Vertical separation at origin	0.000sft
Slope north	0.000ppm
Slope east	0.000ppm

## Geoid Model Definition

GEOID99 (Conus)

### Residual Differences Between GPS (WGS84) And Local Coordinates

Summary			
	Maximum error	Root Mean Square error	Point
Horizontal	0.010sft	0.001	LITTLE_GPS
Vertical	0.049sft	0.007	WYRICK_GPS
Three-dimensional	0.050sft	0.007	WYRICK_GPS

WGS84 Coordinates		Calculated point FOR DISPLAY ONLY		Local Coordinates	
Point	LITTLE_GPS	Northing	909873.112sft	Point	LITTLE
Latitude	36°14'47.18883"N	Easting	1728512.491sft	Northing	909873.120sft
Longitude	79°55'14.26340"W	Elevation	923.194sft	Easting	1728512.487sft
Height	817.651sft	Horz error	0.010sft	Elevation	923.181sft
		Vert error	0.013sft	Utilized	Horz and Vert
		3D error	0.016sft	Quality	Control quality
Point	WYRICK_GPS	Northing	886491.071sft	Point	WYRICK
Latitude	36°10'59.62294"N	Easting	1771530.618sft	Northing	886491.070sft
Longitude	79°46'26.92372"W	Elevation	800.858sft	Easting	1771530.613sft
Height	698.059sft	Horz error	0.005sft	Elevation	800.907sft
		Vert error	0.049sft	Utilized	Horz and Vert
		3D error	0.050sft	Quality	Control quality
Point	BURLPORT_GPS	Northing	835444.705sft	Point	BURLPORT
Latitude	36°02'40.23636"N	Easting	1857545.245sft	Northing	835444.704sft
Longitude	79°28'54.74176"W	Elevation	613.933sft	Easting	1857545.244sft
Height	514.992sft	Horz error	0.001sft	Elevation	613.926sft
		Vert error	0.007sft	Utilized	Horz and Vert
		3D error	0.007sft	Quality	Control quality
Point	HAWTHORNE RESET	Northing	851334.844sft	Point	HAWTHORNE RESET
Latitude	36°05'07.81285"N	Easting	1722538.944sft	Northing	851334.844sft
Longitude	79°56'20.42102"W	Elevation	890.848sft	Easting	1722538.951sft
Height	787.588sft	Horz error	0.008sft	Elevation	890.877sft
		Vert error	0.030sft	Utilized	Horz and Vert
		3D error	0.031sft	Quality	Control quality
Point	U2525C-1_GPS	Northing	873920.392sft	Point	U2525C-1
Latitude	36°08'56.05893"N	Easting	1781284.671sft	Northing	873920.391sft
Longitude	79°44'26.80699"W	Elevation	851.714sft	Easting	1781284.671sft
Height	749.982sft	Horz error	0.001sft	Elevation	851.726sft
		Vert error	0.012sft	Utilized	Horz and Vert
		3D error	0.012sft	Quality	Adjusted quality
Point	U2525C-2_GPS	Northing	874862.119sft	Point	U2525C-2
Latitude	36°09'05.40062"N	Easting	1781687.914sft	Northing	874862.119sft
Longitude	79°44'21.97616"W	Elevation	825.749sft	Easting	1781687.913sft
Height	723.988sft	Horz error	0.002sft	Elevation	825.772sft
		Vert error	0.022sft	Utilized	Horz and Vert
		3D error	0.022sft	Quality	Adjusted quality

Point	U2525C-3_GPS	Northing	872233.462sft	Point	U2525C-3
Latitude	36°08'38.58783"N	Easting	1770822.379sft	Northing	872233.461sft
Longitude	79°46'34.20254"W	Elevation	847.968sft	Easting	1770822.380sft
Height	745.870sft	Horz error	0.001sft	Elevation	847.962sft
		Vert error	0.006sft	Utilized	Horz and Vert
		3D error	0.006sft	Quality	Adjusted quality
Point	U2525C-4_GPS	Northing	873862.331sft	Point	U2525C-4
Latitude	36°08'54.69168"N	Easting	1770787.941sft	Northing	873862.330sft
Longitude	79°46'34.77768"W	Elevation	834.744sft	Easting	1770787.941sft
Height	732.561sft	Horz error	0.001sft	Elevation	834.745sft
		Vert error	0.001sft	Utilized	Horz and Vert
		3D error	0.001sft	Quality	Adjusted quality
Point	U2525C-5_GPS	Northing	868656.204sft	Point	U2525C-5
Latitude	36°08'02.71452"N	Easting	1764434.492sft	Northing	868656.203sft
Longitude	79°47'51.72843"W	Elevation	829.938sft	Easting	1764434.493sft
Height	727.744sft	Horz error	0.001sft	Elevation	829.916sft
		Vert error	0.022sft	Utilized	Horz and Vert
		3D error	0.022sft	Quality	Adjusted quality
Point	U2525C-6_GPS	Northing	869750.607sft	Point	U2525C-6
Latitude	36°08'13.54482"N	Easting	1764543.107sft	Northing	869750.607sft
Longitude	79°47'50.51160"W	Elevation	805.515sft	Easting	1764543.107sft
Height	703.265sft	Horz error	0.001sft	Elevation	805.493sft
		Vert error	0.017sft	Utilized	Horz and Vert
		3D error	0.017sft	Quality	Adjusted quality
Point	U2524C-7_GPS	Northing	872641.572sft	Point	U2524C-7
Latitude	36°08'41.24613"N	Easting	1753653.105sft	Northing	872641.571sft
Longitude	79°50'03.55869"W	Elevation	806.621sft	Easting	1753653.107sft
Height	703.730sft	Horz error	0.002sft	Elevation	806.594sft
		Vert error	0.026sft	Utilized	Horz and Vert
		3D error	0.026sft	Quality	Adjusted quality
Point	U2524C-8_GPS	Northing	873896.814sft	Point	U2524C-8
Latitude	36°08'53.63499"N	Easting	1753375.294sft	Northing	873896.812sft
Longitude	79°50'07.07434"W	Elevation	824.173sft	Easting	1753375.295sft
Height	721.205sft	Horz error	0.001sft	Elevation	824.150sft
		Vert error	0.022sft	Utilized	Horz and Vert
		3D error	0.023sft	Quality	Adjusted quality

## DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NGS FOR MONUMENT "WYRICK"  
 WITH NAD 83/95 STATE PLANE GRID COORDINATES OF  
 NORTHING: 886491.0682(ft) EASTING: 1771530.6138(ft)  
 ELEVATION: 800.91(ft)  
 THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99995649  
 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "WYRICK" TO -L- STATION 249+73.00 IS  
 S 40°01'04" E 20,269.38  
 ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88

NOTE: DRAWING NOT TO SCALE